



NEB-211US.ST25.txt
SEQUENCE LISTING

<110> Evans, Thomas C.
Pradhan, Sriharsa

<120> Organellar Targeting of RNA and its Use in the Interruption of
Environmental Gene Flow

<130> NEB-211-US

<140> 10/698,630
<141> 2003-10-31

<150> 60/423,341
<151> 2002-11-01

<160> 50

<170> PatentIn version 3.2

<210> 1
<211> 486
<212> RNA
<213> unknown

<220>
<223> Tetrahymena thermophila fused with Aequorea victoria

<220>
<221> misc_feature
<222> (1)..(44)
<223> n is a, c, g, or u

<220>
<221> misc_feature
<222> (53)..(57)
<223> n is a, c, g, or u

<400> 1
nnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnnnnnnnnn nnnnugauuc ugnnnnnnaaa 60
aguuaucagg caugcaccug guagcuaguc uuuaaaccaa uagauugcau cgguuuuaaaa 120
ggcaagaccg ucaaaauugcg ggaaaggggu caacagccgu ucaguaccaa gucucagggg 180
aaacuuugag augggccuugc aaagggguaug guaauaagcu gacggacaug guccuaacca 240
cgcagccaag uccuaaguca acagaucuuu uguugauaug gaugcaguuc acagacuaaa 300
ugucggucgg ggaagaugua uucuuucuuu aagauauagu cggaccucuc cuuaauggga 360
gcuagcggau gaagugaugc aacacuggag ccgcugggaa cuaauuugua ugcgaaagua 420
uauugauuag uuugggagua cucgggaauu aaagcuacu ucaaaaauag acacaacauu 480
aaauaa 486

<210> 2
<211> 64
<212> RNA
<213> Aequorea victoria

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<220>
 <221> misc_feature
 <222> (21)..(64)
 <223> n is a, c, g, or u

<400> 2
 augacaaaca aaagaauaga nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60
 nnnn 64

<210> 3
 <211> 247
 <212> DNA
 <213> avocado sunblotch viroid

<400> 3
 ttattagaa caagaagtga ggatatgatt aaactttggt tgacgaaacc aggtctgttc 60
 cgactttccg actctgagtt tcgacttggt agagaaggag gagtcgtggt gaacttttat 120
 taaaaaaatt agttcactcg tcttcaatct cttgatcact tcgtctcttc agggaaagat 180
 gggaagaaca ctgatgagtc tcgcaagggt tactcctcta tcttcattgt ttttttacia 240
 aatcttg 247

<210> 4
 <211> 1069
 <212> DNA
 <213> unknown

<220>
 <223> Fusion construct of avocado sunblotch viroid, Nicotiana tabacum
 and Aequorea victoria

<400> 4
 ttattagaa caagaagtga ggatatgatt aaactttggt tgacgaaacc aggtctgttc 60
 cgactttccg actctgagtt tcgacttggt agagaaggag gagtcgtggt gaacttttat 120
 taaaaaaatt agttcactcg tcttcaatct cttgatcact tcgtgctagc atgtatttgg 180
 caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta 240
 gttggaaatt ttgtgaaaga ttcctatgaa aagtttcatt aacacggaat tcgtgtcgag 300
 tagaccttgt tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa 360
 aggagaagaa cttttcactg gagttgtccc aattcttggt gaattagatg gtgatgttaa 420
 tgggcacaaa ttttctgtca gtggagaggg tgaaggatgat gcaacatacg gaaaacttac 480
 ccttaaattt atttgacta ctggaaaact acctgttcca tggccaacac ttgtcactac 540
 tttctcttat ggtgttcaat gcttttcaag ataccagat catatgaagc ggcacgactt 600
 cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga 660
 cgggaactac aagacacgtg ctgaagtcaa gtttgagggg gacaccctcg tcaacaggat 720

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cgagcttaag ggaatcgatt tcaaggagga cggaaacatc ctcggccaca agttggaata	780
caactacaac tcccacaacg tatacatcac ggcagacaaa caaaagaatg gaatcaaagc	840
taacttcaaa attagacaca acattgaaga tggaagcggt caactagcag accattatca	900
acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac	960
acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt	1020
tgtaacagct gctgggatta cacatggcat ggatgaacta tacaataa	1069

<210> 5
 <211> 1069
 <212> DNA
 <213> unknown

<220>
 <223> Fusion construct of avocado sunbotch viroid, *Nicotiana tabacum*
 and *Aequorea victoria*

<400> 5	
acttgtgaga gaaggaggag tcgtggtgaa cttttattaa aaaaattagt tcactcgtct	60
tcaatctctt gatcacttcg tctcttcagg gaaagatggg aagaacactg atgagtctcg	120
caaggtttac tcctctatct tcattgtttt tttaaaaaat cttggctagc atgtatttgg	180
caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta	240
gttggaatt ttgtgaaaga ttcttatgaa aagtttcatt aacacggaat tcgtgtcgag	300
tagacctgtg tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa	360
aggagaagaa cttttcactg gagttgtccc aattcttggt gaattagatg gtgatgttaa	420
tgggcacaaa ttttctgtca gtggagaggg tgaaggatg gcaacatacg gaaaacttac	480
ccttaatttt atttgacta ctggaaaact acctgttcca tggccaacac ttgtcactac	540
tttctcttat ggtgttcaat gcttttcaag ataccagat catatgaagc ggcacgactt	600
cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga	660
cgggaactac aagacacgtg ctgaagtcaa gtttgagggg gacaccctcg tcaacaggat	720
cgagcttaag ggaatcgatt tcaaggagga cggaaacatc ctcggccaca agttggaata	780
caactacaac tcccacaacg tatacatcac ggcagacaaa caaaagaatg gaatcaaagc	840
taacttcaaa attagacaca acattgaaga tggaagcggt caactagcag accattatca	900
acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac	960
acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt	1020
tgtaacagct gctgggatta cacatggcat ggatgaacta tacaataa	1069

<210> 6
 <211> 1069

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<212> DNA
<213> unknown

<220>
<223> Fusion construct of avocado sunblotch viroid, *Nicotiana tabacum*
and *Aequorea victoria*

<400> 6
tcttcagggg aagatgggaa gaacactgat gagtctcgca aggtttactc ctctatcttc 60
attgtttttt tacaaaatct tgtttattag aacaagaagt gaggatatga ttaaactttg 120
tttgacgaaa ccaggtctgt tccgactttc cgactctgag tttcgctagc atgtatttgg 180
caaatcaaat accatggtct aataatcaaa cattctgatt agttgataat attagtatta 240
gttggaattt ttgtgaaaga ttcctatgaa aagtttcatt aacacggaat tcgtgtcgag 300
tagaccttgt tgttgtgaga attcttaatt catgagttgt agggagggat ttatgagtaa 360
aggagaagaa cttttcactg gagttgtccc aattcttggt gaattagatg gtgatgttaa 420
tgggcacaaa ttttctgtca gtggagaggg tgaaggatg gcaacatacg gaaaacttac 480
ccttaaattt atttgacta ctggaaaact acctgttcca tggccaacac ttgtcactac 540
tttctcttat ggtgttcaat gcttttcaag ataccagat catatgaagc ggcacgactt 600
cttcaagagc gccatgcctg agggatacgt gcaggagagg accatctctt tcaaggacga 660
cggaactac aagacacgtg ctgaagtcaa gtttgaggga gacaccctcg tcaacaggat 720
cgagcttaag ggaatcgatt tcaaggagga cggaacatc ctcggccaca agttggaata 780
caactacaac tcccacaacg tatacatcac ggcagacaaa caaagaatg gaatcaaagc 840
taacttcaaa attagacaca acattgaaga tggaagcggt caactagcag accattatca 900
acaaaatact ccaattggcg atggccctgt ccttttacca gacaaccatt acctgtccac 960
acaatctgcc ctttcgaaag atcccaacga aaagagagac cacatggtcc ttcttgagtt 1020
tgtaacagct gctgggatta cacatggcat ggatgaacta tacaataa 1069

<210> 7
<211> 52
<212> DNA
<213> *Tetrahymena thermophila*

<400> 7
gccatggaac tcgagcccg ctttccaaa gttatcaggc atgcacctgg ta 52

<210> 8
<211> 53
<212> DNA
<213> *Tetrahymena thermophila*

<400> 8
gattgcatcg gtttaaaagg caagaccgtc aaattgcggg aaaggggtca aca 53

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<210> 9
 <211> 52
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 9
 tcaggggaaa ctttgagatg gccttgcaaa gggatatggta ataagctgac gg 52

 <210> 10
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 10
 gccaaatcct aagtcaacag atcttctggt gatatggatg cagttcacag act 53

 <210> 11
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 11
 atgtattctt ctcataagat atagtcggac ctctccttaa tgggagctag cgg 53

 <210> 12
 <211> 52
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 12
 gagccgctgg gaactaattt gtatgcgaaa gtatattgat tagttttgga gt 52

 <210> 13
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 13
 gctgcagagg cggccgcaa aggaccgaat gcgagtactc caaaactaat caa 53

 <210> 14
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 14
 ttagttccca gcggctccag tgttgcatca cttcatccgc tagctcccat taa 53

 <210> 15
 <211> 52
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 15
 ttatgagaag aatacatctt ccccgaccga catttagtct gtgaactgca tc 52

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<210> 16
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 16
 ttgacttagg acttggtgc gtggttagga ccatgtccgt cagcttatta cca 53

 <210> 17
 <211> 52
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 17
 ctcaaagttt cccctgagac ttggtactga acggctgttg acccctttcc cg 52

 <210> 18
 <211> 53
 <212> DNA
 <213> Tetrahymena thermophila

 <400> 18
 tttaaaccga tgcaatctat tggtttaaag actagctacc aggtgcatgc ctg 53

 <210> 19
 <211> 61
 <212> DNA
 <213> unknown

 <220>
 <223> oligonucleotide

 <400> 19
 catgcaccag gatttgtcgt gaggcctgag ttcagaccgg tgaattgaga acacggtaag 60
 a 61

 <210> 20
 <211> 60
 <212> DNA
 <213> unknown

 <220>
 <223> oligonucleotide

 <400> 20
 ttttcttacc gtgttctcaa ttcaccgggtc tgaactcagg cctcacgaca aatcctggtg 60

 <210> 21
 <211> 30
 <212> DNA
 <213> unknown

 <220>
 <223> primer

 <400> 21
 ggcccatggg taaaggagaa gaacttttca 30

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<210> 22
 <211> 38
 <212> DNA
 <213> unknown

<220>
 <223> primer

<400> 22
 ggcaccggtt ttctacgata agagaaagta gtgacaag 38

<210> 23
 <211> 30
 <212> DNA
 <213> unknown

<220>
 <223> primer

<400> 23
 ggcgaatgcg ggtgttcaat gcttttcaag 30

<210> 24
 <211> 33
 <212> DNA
 <213> unknown

<220>
 <223> primer

<400> 24
 gaagcggccg cttatttgta tagttcatcc atg 33

<210> 25
 <211> 49
 <212> DNA
 <213> unknown

<220>
 <223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 25
 tttattaaaa aaattagttc actcgtcttc aatctcttga tcacttcgt 49

<210> 26
 <211> 49
 <212> DNA
 <213> unknown

<220>
 <223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 26
 ctaatttttt taataaaagt tcaccacgac tcctccttct ctcacaagt 49

<210> 27

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<211> 39
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 27
gtctagaact tgtgagagaa ggaggagtcg tggatgaact 39

<210> 28
<211> 50
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 28
ggaagaacac tgatgagtct cgcaagggtt actcctctat cttcattgtt 50

<210> 29
<211> 40
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 29
ggctagccaa gattttgtaa aaaaacaatg aagatagagg 40

<210> 30
<211> 51
<212> DNA
<213> unknown

<220>
<223> synthetic DNA equivalent of avocado sunblotch viroid

<400> 30
ctcatcagtg ttcttcccat ctttccctga agagacgaag tgatcaagag a 51

<210> 31
<211> 40
<212> DNA
<213> Nicotiana tabacum

<400> 31
gggctagcat gtatttggca aatcaaatac catgggtctaa 40

<210> 32
<211> 52
<212> DNA
<213> Nicotiana tabacum

<400> 32
agttgataat attagtatta gttggaaatt ttgtgaaaga ttcctatgaa aa 52

NEB-211US.ST25.txt

<210> 33
 <211> 52
 <212> DNA
 <213> Nicotiana tabacum

 <400> 33
 tcgtgtcgag tagaccttgt tgttgtgaga attcttaatt catgagttgt ag 52

 <210> 34
 <211> 40
 <212> DNA
 <213> Nicotiana tabacum

 <400> 34
 ccgctcttca cataaatccc tccctacaac tcatgaatta 40

 <210> 35
 <211> 52
 <212> DNA
 <213> Nicotiana tabacum

 <400> 35
 aggtctactc gacacgaatt ccgtgttaat gaaacttttc ataggaatct tt 52

 <210> 36
 <211> 52
 <212> DNA
 <213> Nicotiana tabacum

 <400> 36
 tactaatatt atcaactaat cagaatgttt gattattaga ccatggtatt tg 52

 <210> 37
 <211> 41
 <212> DNA
 <213> unknown

 <220>
 <223> primer

 <400> 37
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 <210> 38
 <211> 31
 <212> DNA
 <213> unknown

 <220>
 <223> primer

 <400> 38
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 <210> 39

NEB-211US.ST25.txt

<211> 40
<212> DNA
<213> unknown

<220>
<223> primer

<400> 39
gggctagcgc tgctcttcca tggaatccct gacgttaca 40

<210> 40
<211> 43
<212> DNA
<213> unknown

<220>
<223> primer

<400> 40
ggcctgcagg agctctttct gccacctgga gagtgtact gtt 43

<210> 41
<211> 61
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

<400> 41
catgttgcca aatgtttgaa cgatcgggga aattcgagct cgaattgtga tagccgcctg 60
g 61

<210> 42
<211> 60
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

<400> 42
tttccaggcg gctatcaca ttcgagctcg aatttccccg atcgttcaaa catttgga 60

<210> 43
<211> 27
<212> DNA
<213> unknown

<220>
<223> primer

<400> 43
ggcgaatgcg cgctatctgg tcgaggg 27

<210> 44
<211> 36

NEB-211US.ST25.txt

<212> DNA
<213> unknown

<220>
<223> primer

<400> 44
gaagcggccg caccggttta ggcaggcgta ctcatt 36

<210> 45
<211> 35
<212> DNA
<213> unknown

<220>
<223> primer

<400> 45
gggctagcgc tgctcttcca tggccaccgc cgccg 35

<210> 46
<211> 43
<212> DNA
<213> unknown

<220>
<223> primer

<400> 46
ggcctgcagg agctctttct ttcattgtgct tccttcaaga aga 43

<210> 47
<211> 61
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

<400> 47
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c 61

<210> 48
<211> 60
<212> DNA
<213> unknown

<220>
<223> oligonucleotide

<400> 48
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<210> 49
<211> 31
<212> DNA

<213> unknown

<220>

<223> primer

<400> 49

ggcgaatgcg caaagaagag ctttgacttt g

31

<210> 50

<211> 35

<212> DNA

<213> unknown

<220>

<223> primer

<400> 50

gaagcggccg caccggttca gtacacagtc ctgcc

35